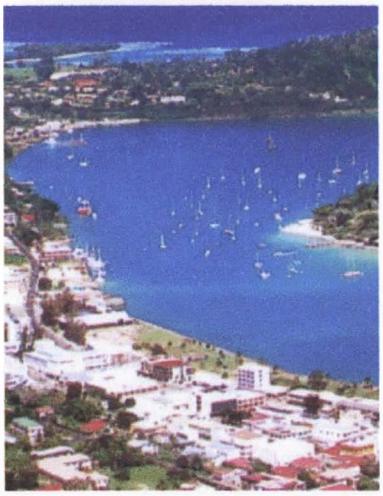
Institut Agronomique néo-Calédonien

Programme Forêt

SPRIG



CONFERENCE REGIONALE DU PACIFIQUE SUR LES RESSOURCES GENETIQUES FORESTIERES

(Pacific Sub Regional Workhop on Forest and Tree Genetic Resources)

PORT-VILA

28 Mai - 01 juin 2001

Rapport de Mission

Jean Michel SARRAILH

IAC/Forêt
06/2001

I.A.C./Forêt Centre J.F. Cherrier BP 10 001 98 805 Nouméa, Nouvelle-Calédonie, tel 24 65 15 , fax 24 65 19

1 - Introduction

Cette réunion fait suite à celle qui s'est déroulée en 1999 à **APIA** (Samoa) à laquelle participait Yves Ehrhart pour le CIRAD (Rapport de Mission CIRAD-Nouméa 1999), ainsi que Christian Papineau pour la Province Nord de Nouvelle-Calédonie (Rapport de mission - DDRP /SFBE Province Nord Koné 1999).

Avant de présenter plus en détail le SPRIG (South Pacific Régional Initiative for Genetic resources conservation), on notera que ce projet essentiellement bâtis autour d'une aide Australienne vers les états du Pacifique, est intégré au programme forestier de la CPS (Commission du Pacifique Sud) qui représente aussi la FAO pour le Pacifique. Le CIRAD-Forêt est associé depuis plusieurs années avec la CPS, et aujourd'hui il en est de même pour l'IAC.

Il est bon à ce sujet de rappeler que le Directeur Général de l'IAC, Monsieur Thierry Mennesson, est le délégué régional du CIRAD pour le Pacifique Sud. Il faut donc considérer **que le rapport de mission IAC fait donc aussi office de** rapport de **mission CIRAD.**

2- Avant la mission

Nous avons été prévenu très tardivement de cette conférence régionale. Ce n'est que le 17 mai que la décision de participer a été prise avec Thierry Mennesson. Le jour même Jean Marc Bouvet a été contacté et a donné son approbation.

Interrogés, Lex Thomson (CSIRO) et Kanawi Pouru (CPS) ont répondu positivement, instantanément (et de façon enthousiaste) à ma demande pour que l'on rajoute une présentation CIRAD et IAC.

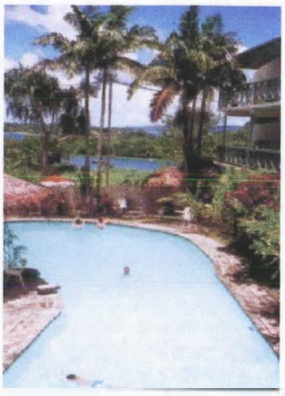
Cette conférence s'est déroulé dans la foulée :

1- d'une réunion triennale PHALPS (Permanent Heads of Agriculture and Livestock Production Services) des responsables de l'agriculture du Pacifique qui s'est tenue du 30 avril au 4 mai à Nadi -Fidji. Avec la participation de Patrick Durand responsable CIRAD de la zone Asie-Pacifique. De ce fait sans doute, la conférence SPRIG a eu moins de représentant.

2- Quelques jours après cette conférence, nous avons reçu à Nouméa un chercheur CPS/GTZ, Christine Fung, venue brièvement en Nouvelle-Calédonie visiter les réalisations sur le Santal.

Pour être dans les délais, un ordre de mission a été fait par l'IAC, le billet d'avion payé par l'IAC et les frais sur place avancé par l'agent. Dans ces conditions il a été jugé préférable de se cantonner à la conférence et nous n'avons pas effectué le voyage sur Santo.

3 - La mission



Lundi 28 Mai : Vol Nouméa Port-Vila
La réservation avait été faite par Lex thomson au Kaiviti Motel ⟶

Accueil dès l'arrivée par Lex thomson, mais pas de possibilité d'aller ce jour là faire le « field trip ». Finalement je pourrais l'organiser moi-même le Jeudi grâce à la collaboration très amicale du service forestier du Vanuatu.

Mardi 29 Mai : matin - ouverture de la conférence, bilan des activités du SPRIG phase 1.

Après-midi : présentation des organisations régionales (SPC Forestry program), SPREP, FAO SAPA, et des Instituts (CSIRO, PNG Twinning project, QFRI, CIRAD and IAC.

Mercredi 30 mai : matin - présentation du SPRIG phase 2 et des activités proposées par les pays demandeurs (Vanuatu, Samoa Tonga)
Après-midi : Fidji ; Kiribati, Salomon
Discussions sur les échanges de matériel végétal et les problèmes de l'assistance australienne vis à vis des Iles Salomon et de Fidji.

Jeudi 31 mai : matin - visite du service forestier de Port-Vila, visite de *Santalum austrocaledonicum* en milieu naturel (3 sites), visite d'une distillerie, visite de la pépinière et de plantations de démonstration.

Vendredi 1 juin : retour Port-Vila - Nouméa

4 - Personnes rencontrées

Nous n'avons pas reçu la liste des personnes présentes. Nonobstant quelques omissions la liste de la plupart des participants est inscrite en annexe.
Je rappelle que suite aux courts délais, et à la conférence PHALPS tenue juste précédemment, je me suis retrouvé le seul francophone.
Nous avons pu nouer des conversations amicales et fructueuses avec :
Le service forestier du Vanuatu : Livo Mele (chef du service) et Adam Gerrand
CSIRO : Lex thomson et Sephen Midgley
QFRI (genetic resources): responsable Mark hunt
FAO /SAPA (Sub Regional Office for the Pacific Islands) : Aru Mathias (ancien chef du service forestier du Vanuatu)
PROE-SPREP (Programme régional océanien de l'environnement) Joe Reti
CPS : responsable du programme forestier : Kanawi Pouru (remplace Tang Hon Tat)

Enfin, lors de l'ouverture de la conférence nous avons pu discuter avec le ministre de l'agriculture, des forets, des pêches et de la météorologie du Vanuatu qui, sans doute du fait de sa francophonie, ne cache pas ses sentiments d'intérêt à une coopération avec la France et la Nouvelle-Calédonie.

5 - Présentation de l'IAC et du programme forêt

La présentation est en annexe (texte et diapos sous powerpoint) .
C'est la diapo sur la diversité génétique du santal emprunté au rapport de stage d' I. Pacault qui a le plus enthousiasmé l'assistance. Après l'exposé, le Vanuatu a fait une copie du rapport, puis Kanawi Pouru a récupéré le document pour faire réaliser une traduction en anglais par la CPS. La FAO (Aru Mathias) attend la traduction.
Autres discussion sur le projet PTOM (Wallis, Nouvelle-Calédonie, Polynésie Française), qui apparaît comme la suite logique de la présence de représentants lors de la dernière conférence à Apia. En effet, le SPRIG est à la fois un programme d'aide australien (et de ce fait il n'intéresse pas les PTOM), mais aussi un programme d'action régionale de la CPS (et il en fait donc bien parti).

6 - Principaux thèmes abordés

Le SPRIG : South Pacific Regional Initiative on Forest Resources (en annexe la présentation faite dans la revue de la CPS Pacific Islands Forests & Trees)

Le SPRIG est un projet régional financé par l'aide australienne (AusAid), qui englobait dans un premier temps les organisations forestières publiques d'Australie, Tonga, Vanuatu, Samoa. La première phase a été lancée en 1996 avec ces états puis devait être étendus à Fidji et les Iles Salomon (30/11/96 à 29/02/00). Le projet a coûté environ 12 millions de francs (2.9 millions Aust. $), et centré sur la conservation, et le renforcement de l'utilisation durable des ressources génétiques forestières dans le pacifique sud.
La phase 2, a pour but de continuer les actions menées dans la phase 1 en transférant progressivement les activités aux organisations régionales et nationales pour une période de 5 ans.
La part australienne est constituée d'un consortium formé par le CSIRO Forestry and Forest Products, le Queensland Forest Research Institute et FORTECH. Elle atteint 17 millions de francs (4.2 millions Aust. $) pour 5 ans.
Les institutions régionales partenaires sont la CPS (Commission du Pacifique sud) dont le programme forestier est basé à Suva, Fidji, le SPREP (Programme océanien pour l'environnement) basé à Apia, Samoa et USP (l'Université du Pacifique Sud basé à Suva, Fidji).
La Papouasie-Nouvelle Guinée relève d'un projet PNG-Twinning avec l'Australie.
On note aussi un élargissement du projet à Kiribati et aux îles Cook.
Ne relevant pas de l'aide australienne mais associé à ce programme la Nouvelle-Calédonie participe aux différentes réunions et le CIRAD plus particulièrement en ce qui concerne

le Santal. Sont aussi associés au réseau, la Polynésie française ainsi que Wallis et Futuna.

Les objectifs sont :
le renforcement des institutions et des réseaux régionaux
La conservation et la gestion durable des espèces prioritaires (santal, kaori, white wood, ...)
L'amélioration génétique (rosewood, mahogany...)
L'amélioration du revenu des communautés rurales par les produits forestiers

Remarques :
Le CIRAD est associé au programme SPRIG, depuis le début, dans le cadre des collaborations et plus particulièrement pour son travail sur le santal. La Nouvelle-Calédonie n'est pas éligible pour le financement par l'Australie mais a participé à la définition des espèces prioritaires. Du fait de l'originalité du statut de la Nouvelle-Calédonie et de ses trois politiques forestières distinctes c'est en fait le Cirad (et donc l'IAC) qui apparaît le plus lisible pour les partenaires.

Le programme forestier de la CPS

La CPS abrite désormais le programme forestier de la FAO. Son responsable Kanawi Pouru a exposé les priorités actuelles :
Titre : renforcer les capacités nationales programmes forestiers des pays insulaires du Pacifique pour gérer la forêt, les arbres et les ressources végétales, pour augmenter les revenus et les moyens d'existence sans diminuer les fonctions environnementales et les valeur des forêts pour les futures générations.

1 – gestion durable de la forêt
2 – utilisation durable des produits forestiers
3 – agroforesterie

la CPS assure une assistance technique en organisant des stages de formation, des ateliers de travail et la dissémination de l'information.
Elle aide à la collaboration et à la coopération entre pays.
En 2000 :
Atelier sur l'exploitation forestière
Culture du bambou
Organisation du 9ème Head of forestry meeting
Stages communautaires pour les femmes
Atelier de travail sur l'agroforesterie dans les atolls

En 2001 :
Assistance pour l'organisation de stages de formation
Développement des produits non forestiers (bambou , noni (*Calophyllum*, noix...)
Plan d'aménagement des bassins versants en montagne
Développement d'une base de données régionale

Support au projet SPRIG
Collaboration en réseau avec les pays non SPRIG, le CIRAD-Forêt pour le santal, avec les pays travaillant sur les produits non forestiers (bambou, *canarium*, fruit à pain) ;

Remarques :
Le CIRAD a une très bonne image auprès de la CPS. Les excellents contacts entretenus par Robert Nasi et yves Ehrhart avec le précédent responsable forestier Tang Hon Tat et le travail fait sur le Santal est régulièrement cité dans les documents de cet organisme. Après une période de contact interrompu (départ d'Y. Ehrhart et de Tang Hon Tat, non participation au 9 ème sommet forestier du pacifique), il a fallu renouer les fils. Ceci est désormais réalisé mais reste encore fragile.

Le CSIRO et le QFRI

L e CSIRO est le poids lourd de la recherche dans le Pacifique (6000 personnes et financement à 70% par le gouvernement fédéral). Le seul programme forestier comprend 230 personnes, dont 64 travaillent dans la branche *amélioration des arbres et ressources génétiques forestières*.
Les chercheurs présents Lex thomson et Stephen Midgley connaissent très bien le CIRAD-Forêt et de nombreux chercheurs de cet organisme.
Le Queensland Forestry Research Institute a une taille non négligeable avec 43 chercheurs, 42 techniciens, 28 personnel de terrain et 10 administratifs.
Le département génétique comporte 7 chercheurs, 8 techniciens et 15 agents de terrain .
Il était représenté par son responsable génétique Mark Hunt
Remarques
Le chercheur forestier calédonien et son Vat ne pèsent pas lourd face à ces organismes. Pourtant l'IAC apparaît aux autres pays comme la seule alternative face aux chercheurs australiens. Dans le domaine du santal on est perçu comme un organisme d'excellence scientifique. A mon sens, les travaux de génétiques réalisés par le CIRAD (très brièvement présentés) ont conforté cette opinion.
On note là aussi l'importance de garder le contact avec ces organismes incontournables dans le Pacifique.

La FAO

La FAO est représentée par la CPS. Elle a néanmoins une antenne sous-régionale à Apia (Samoa) sous la dénomination FAO/SAPA (sub-régional Office for the Pacific Islands) et édite une note d'information SAPA Newsletter. Son responsable forestier (Forest Resources Management Officer) Aru Mathias est l'ancien chef du service forestier du Vanuatu.
Remarques :
Aru Mathias sera évidemment très favorable à tous projets qui intégreraient le Vanuatu. Connaît bien le CIRAD et Y. Ehrhart.

Le SPREP ou PROE

Programme Régional Océanien de l'Environnement est basé à Apia.
Ses objectifs sont :
Contrôle effectif des plantes envahissantes (problème majeur sur certaines îles)
Meilleure gestion des forêts au niveau des communautés rurales
Renforcement des législations
Meilleure communication avec le public
Meilleure connaissance des ressources forestières.
Le South Pacific Biodiversity Conservation Programme SPBCP est financé à hauteur de 10 millions $ sur 5 ans.
Le responsable est Joe Reti. Mais c'est un autre responsable de cet organisme, Mac McIntyre, qui est venu en avril 2001 en Nouvelle-Calédonie présenter le PROE.

Les échanges de matériel végétal

Pour pouvoir fonctionner le SPRIG nécessite des échanges de matériel végétal. Pour ne pas léser les partenaires ils se font en respectant un code de conduite (annexe)

Les partenaires acceptent que :

Dans le cadre du SPRIG le germplasme des arbres soit récolté et fourni pour la recherche et la création de parcelles de démonstration seulement et reste la propriété de chaque partenaire qui y a contribué

La distribution du matériel à un pays hors SPRIG et/ou à but de développement commercial de matériel non indigène au pays nécessite une négociation supplémentaire avec la partie SPRIG qui a procuré le germplasme d'origine.

Remarque :
La Nouvelle-Calédonie n'est pas dans la liste des pays SPRIG

Les programmes nationaux

Ils concernent des espèces locales et introduites (voir liste en annexe).

Vanuatu : les travaux portent essentiellement sur le santal, le kaori *Agathis macrophylla* et *Agathis sylbaeae*, white wood *Endospermum medullosum*, ainsi que sur le mahogany *Swietenia macrophylla*, rosewood *Pterocarpus indicus*.

Samoa : *Swietenia macrophylla*

Fidji : *Agathis vitiensis* , mahogany *Swietenia macrophylla*, santal *Santalum yasi*

Salomon : teck, mahogany, rosewood *Pterocarpus spp.*

Tonga : agroforesterie et *Toona ciliata, Santalum yasi* ...

Kiribati : sur cet archipel étendu sur 4000 km de large dans le Pacifique, la culture ancestrale du pandanus permet d'obtenir aujourd'hui des variétés hautement comestibles.

Remarques :
Avec le Vanuatu, outre le santal, on peut envisager pour la Nouvelle-Calédonie des thèmes communs pour plusieurs espèces ou genres comme le kaori, le mahogany, le kohu (Intsia bijuga), le rosewood (Pterocarpus indicus).
La GTZ a des essais de Santal sur le Vanuatu et sur les Iles Cook.

Visite sur le terrain

Nous sommes allés visiter des santal autour de Port-Vila en compagnie de Ben Sau.
C'était des sujets de taille modeste conservés dans des jardins familiaux. Par rapport au santal de la Grande Terre de Nouvelle-Calédonie il a un port beaucoup plus étalé, des feuilles larges et arrondies.
Nous avons visité la distillerie qui est assez voisine de celle installée à Maré avec un petit autoclave qui fonctionne au fuel, et un alambic. Il semblerait que le produit obtenu soit d'assez mauvaise qualité, le santal utilisé n'étant pas pur.
La pépinière du service forestier est assez rustique, mais opérationnelle.
On y a surtout vu du White wood et du kaori ainsi qu'un peu de santal.

7 Conclusions à tirer de ce workshop pour monter un projet régional sur la conservation et la mise en valeur des ressources génétiques forestières

La présentation du projet PTOM (Nouvelle-Calédonie, Polynésie française, Wallis et Futuna) représente pour le SPRIG une ouverture vers les territoires français du pacifique. Cette ouverture est fortement encouragée par la CPS et la FAO sur le plan institutionnel, par les organismes de recherches australiens ainsi que par les pays du Pacifique. Il est clair que ceux ci attendent avant tout des moyens financiers, mais certains pays comme le Vanuatu souhaitent aussi une coopération avec la Nouvelle-Calédonie et la France.
Aujourd'hui les PTOM n'ont que très peu de chance de voir un projet financé par l'Europe, si ce projet n'englobe pas des pays moins favorisés. Il semble que ce soit avec le Vanuatu que l'on aura le plus facilement des appuis et une demande forte du pays.
Il semble aussi que l'on puisse s'associer avec le GTZ qui travaille déjà avec le Vanuatu et les Iles Cook (où Y. Ehrhart a déjà travaillé). Une association purement scientifique peut-être envisagée avec l'Australie (incontournable partenaire dans cette région du monde).
Il est sur qu'actuellement il est délicat d'envisager de travailler avec Fidji, rejeté par la plupart des bailleurs de fond pour sa politique anti-démocratique.
Il est indispensable que l'IAC continue l'action du CIRAD au sein des organismes comme la FAP, la CPS ... La participation de Thierry Mennesson au PHALPS a été très bien accueillie.

L'IAC accueille en ce moment une stagiaire, Catherine Latreille, afin de faire le bilan des acquis sur le Santal en Nouvelle-Calédonie, et de dresser les possibilités actuelles de développement de cette espèce.

On est aujourd'hui dans une période de forte opportunité qu'il faut absolument saisir. L'IAC compte maintenir la pression vis à vis de la CPS (envoie de questionnaire sur l'intérêt des pays du Pacifique pour le Santal), ce qui devrait déboucher AVANT LA FIN DE L'ANNEE sur un atelier (Nouméa ou Papeete).

Annexes :

Participants

Carte du Pacifique

Programme du workshop

Le programme SPRIG

Code of conduct for sharing tree germplasm

Presentation (word et ppt)

AUSTRALIA			
Mr Stephen Midgley Program Manager Tree Improvement & ic Resources	CSIRO Forestry and Forest Products PO Box E4008 Kingston Canberra ACT 2604 AUSTRALIA	Ph: (61) 2 6281 8201 Fax: (61) 2 6281 8266 E-mail: Stephen.Midgley@ffp.csiro.au	*Australia and South Pacific representative on FAO Panel of Forest Gene Experts
Mr Doug Boland Project Director, SPRIG	Australian Tree Seed Centre CSIRO Forestry and Forest Products PO Box E4008 Kingston Canberra ACT 2604 AUSTRALIA	Ph: (61) 2 62818203 Fax: (61) 2 62818266 E-mail: Doug.Boland@ffp.csiro.au	*Indigenous knowledge in forest genetic resources including infraspecific variation *Intellectual property issues in regard to forest genetic resources *Agroforestry and use of indigenous species in farming systems
Dr Lex Thomson Team Leader, SPRIG	Australian Tree Seed Centre CSIRO Forestry and Forest Products PO Box E4008 Kingston Canberra ACT 2604 AUSTRALIA	Ph: (61) 2 62818242 Fax: (61) 2 62818266 E-mail: Lex.Thomson@ffp.csiro.au Mobile: (61) 418 446432	Conservation, improvement and management of socio-economically important tree species in the South Pacific, especially *Endospermum*, *Swietenia* and *Santalum* Improving the capability of national and regional institutions in the South Pacific in field of forest genetic resources
Dr Mark Hunt Program Leader - Genetic Resources	Queensland Forestry Research Institute DPI Agency for Food and Fibre Science MS 483, Fraser Road, Gympie, QLD, 4570 AUSTRALIA	Ph: (61) 7 5482 0877 Fax: (61) 7 5482 8755 E-mail: huntm@qfri1.se2.dpi.qld.gov.au Mobile 0408 067649	*Vegetative propagation *Clonal forestry *Training *Economic analysis of propagation strategies
FIJI			
Mr Kanawi Pouru Project Coordinator	SPC – Forests & Trees Programme UNDP Private Mail Bag, Suva FIJI (based in South Pacific Forum Secretariat Complex in Suva)	Ph: (679) 300432 or 305244 Fax: (679) 305212 E-mail: KanawiP@spc.org.fj	
Ms Evelyn Reigber Team Leader	Pacific German Regional Forestry Project Forum Secretariat Complex Suva FIJI	Ph: (679) 305 983 Fax: (679) 315 446 E-mail: gtz@is.com.fj	*native forest management *indigenous tree species for agroforestry systems
Prof Randy Thaman Professor of Pacific Islands Biogeography	Geography Department School of Social and Economic Development The University of the South Pacific PO Box 1168, Suva FIJI	Ph (679) 212546 Fax (679) 301487 E-mail [illegible]	* sustainable use of forestry resources. * ethnobotany of trees and forests, * Pacific Island agroforestry, * community-based biodiversity conservation.
Ms Susana Tuisese – RRA/Conservation	Head - Environment Unit Department of Forestry PO Box 2218, Suva FIJI	Ph: (679) 320211 Fax (679) 301595	
KIRIBATI			
Ms Tearimawa Natake Agroforestry Officer	Division of Agriculture Ministry of Natural Resources Development PO Box 267, Bikenibeu, Tarawa KIRIBATI	Ph. (686) 28096 or 28139 Fax (686) 28121	*implementation of agroforestry project and other related activities

NEW CALEDONIA			
Mr Jean-Michel Sarrailh, IAC-Forêt/New Caledonia, Director	IAC-Forêt / Nouvelle-Caledonie BP 10 001 98805 NOUMEA Cedex NEW CALEDONIA	Ph : (687) 24 65 15 Fax: (687) 24 65 19 E_mail: sarrailh@cirad.fr	Species production and propagation for ultramafic soils (nickel mining areas) * Conservation and use of biodiversity
PAPUA NEW GUINEA			
Mr Michael Poesi Scientific Officer – Species screening	PNG Forest Research Institute PO Box 314, Lae, PAPUA NEW GUINEA	Ph: (675) 472 4188 Fax: (675) 472 4357 E-mail:friadmin@global.net.pg	
SAMOA			
Mr Tolusina Pouli Native Forests	Valima Forest Research and Investigation Section – Forestry Division, MAFFM PO Box 1874, Apia, SAMOA	Ph: (685) 22729 Fax (685) 22565	indigenous forest research and management * forest conservation
Mr Tito Alatimu (Assistant Regional Forest Officer)	West Savaii Reforestation Project Forestry Division, MAFFM Asau, Savaii, SAMOA	Ph: 685 58033 Fax: 685 58004 or 58256 (new direct fax)	*Vegetative propagation of indigenous tree species
Mr Aru Mathias Regional Forestry Officer	FAO Sub-Regional Office for the South Pacific FAO Private Mail Bag Apia, SAMOA	Ph: (685) 22127 or 20710 Fax (685) 22126 E-mail: Aru.Mathias@field.fao.org	
SOLOMON ISLANDS			
Mr Basil Gua SPRIG Project Scientist	Forest Research Station PO Box 79 Munda, Western Province SOLOMON ISLANDS	Ph: (677) 61082 Fax: (677) 61150	*Oversee SPRIG Project activities in Solomons,including seed collection and testing program and propagation research
Mr Richard Pauku – Technical Services Manager	Kolombangara Forest Products Limited Box 382 Honiara SOLOMON ISLANDS	Fax: (677) 60020 & 21090 E-mail: kfpl@welkam.solomon.com.sb	
TONGA			
Mr Tevita Faka'osi Head of Forestry	Forestry and Conservation Division Ministry of Agriculture and Forestry PO Box 14, Nuku'alofa KINGDOM OF TONGA	Ph: (676) 29 500 Fax: (676) 24 271 E-mail: forestry@kalianet.to	*Overall responsibility for forestry and conservation and management of forest and tree genetic resources in Tonga *socio-economic aspects of forestry and conservation
VANUATU			
Mr Livo Mele Director of Forests	Department of Forests Private Mail Bag 064 Port Vila VANUATU	Ph: (678) 23856/23171 Fax: (678) 25051 E-mail: forestry@vanuatu.gov.vu	*Forest policy *Forest management and conservation
Mr Ioan Viji SPRIG Project Scientist	Department of Forests Private Mail Bag 004 Luganville, Espiritu Santo VANUATU	Ph: (678) 36616 Fax: (678) 36112 E-mail: sforestry@vanuatu.gov.vu Or gtzsanto@vanuatu.com.vu	*research and development of Vanuatu tree species


Palikir
MICRONÉSIE
M I C R O N É S I E
Yaren
TUVALU
PAPOUASIE-
NOUVELLE-GUINÉE
P O L Y
Fongafale
Honiara
Port Moresby
ÎLES SALOMON
Matâ' utu
SAMOA-
OCCIDENTALES
Apia
Pago Pago
VANUATU
FIDJI
TERRITOIRE DES ÎLES
DE LA MER DE CORAIL
Port-Vila
Suva
MER DE CORAIL
Alofi
NOUVELLE-CALÉDONIE
Nuku'alofa
Nouméa
10000 m
QUEENSLAND
Brisbane
AUSTRALIE

SPRIG/AusAID, SPC Forestry Program & Vanuatu Department of Forests

1st REGIONAL PROJECT CO-ORDINATING COMMITTEE MEETING FOR PHASE 2 OF SPRIG (SOUTH PACIFIC REGIONAL INITIATIVE ON FOREST GENETIC RESOURCES) TO BE HELD IN AT CLUB VANUATU, PORT VILA, VANUATU

REVISED DRAFT PROGRAM

MONDAY 28th May

1100-1600 – Optional field trip to forest genetic resource-related sites near Port Vila for delegates arriving early (possible sites might include DoF extension plantings/Teouma, sandalwood plantings and oil distillation still, Canarium, mahogany and rattan plantings)
1700-1800 - Workshop Registration at Kai Viti Motel
1800-1900 – Welcome reception at Kai Viti Motel

TUESDAY 29th May

0800-830	Workshop Registration cont' (at Club Vanuatu)
830 -915	Welcome, Introductory remarks & outline of meeting program (Kanawi Pouru & Stephen Midgley) Address by Australian High Commissioner (Mr Perry Head) Opening Address by Minister for Agriculture, Forests, Fisheries & Meteorology
915-945	Morning Tea
SESSION 1 945-1045	REPORT ON & STATUS OF SPRIG PHASE 1 ACTIVITIES (15 min reports plus 5 mins discussion) Samoa (Tolusina Pouli and Tito Alatimu) Tonga (Viliami Manu and Tevita Faka'osi) Vanuatu (Livo Mele and Ioan Viji)
SESSION 2 1100-1200	REPORT ON & STATUS OF SPRIG PHASE 1 ACTIVITIES cont' Fiji including RRA (Susana Tuisese) Solomon Islands (Basil Gua and Gideon Buru) KFPL/Solomon Islands (Richard Pauku)
1200-1300	Lunch
SESSION 3 *1300-1545*	*REGIONAL ORGANIZATIONS* (15 min presentations including discussion) SPC Forestry program (Kanawi Pouru) SPREP (Joe Reti) FAO SAPA (Aru Mathias) *BILATERAL AND NATIONAL PROGRAMS* CSIRO (Stephen Midgley) PNG Twinning Project (Michael Poesi) QFRI (Mark Hunt) CIRAD and IAC (Jean-Michel Sarrailh)
1545-1600	Afternoon tea

WEDNESDAY 31st May

SESSION 1 830-1000	OUTLINE OF PROPOSED SPRIG 2 Project Design and Process (Lex Thomson) PRESENTATION OF SPRIG 2 REGIONAL ACTIVITIES (followed by discussion especially on implementation) SPC (Kanawi Pouru) SPREP (Joe Reti) USP and Database (Lex Thomson)
10-1030	Morning Tea
SESSION 2 1030-1200	PRESENTATION OF PROPOSED SPRIG 2 ACTIVITIES BY REGION/COUNTRY Other Regional – Experts Group/Networking/SPRIG Web site (Lex Thomson) Vanuatu (Livo Mele) Samoa (Tolusina Pouli) Tonga (Tevita Faka'osi)
1200-1300	Lunch
SESSION 3	
1300-1530	PRESENTATION OF PROPOSED SPRIG 2 ACTIVITIES BY COUNTRY cont' Solomon Islands (Gideon Buru, Basil Gua and Richard Pauku) Fiji (Susana Tuisese) Kiribati/Pandanus (Tearimawa Natake) Access issues and Germplasm code of conduct – extension to other PICs (Stephen Midgley)
1530-1600	Afternoon Tea
SESSION 4	
1600-1700	Pacific Regional Forest Genetic Resources Plan of Action (Kanawi Pouru and Aru Mathias) - implementation and any other outstanding issues

South Pacific Regional Initiative on Forest Genetic Resources (SPRIG)

PROPOSED SOUTH PACIFIC REGIONAL INITIATIVE ON FOREST GENETIC RESOURCES (SPRIG) PHASE 2 PROJECT

ABSTRACT

SPRIG Phase 1 was a three-year pilot project that commenced on 30 Nov 1996 and terminated on 29 Feb 2000 following a 3 month extension. This paper provides some background information on a proposed new AusAID funded project named SPRIG Phase 2. The proposed project is of five years duration and it is anticipated that AusAID will call for tenders to implement the project later this year. The overall project design plan for SPRIG Phase 2 is to maintain the momentum commenced in SPRIG Phase 1 in regard to the conservation and utilisation of forest genetic resources, but at the same time to progressively transfer SPRIG activities to regional and national organisations over a five year period. There will be an increased emphasis on development issues in SPRIG Phase 2.

Background

a) SPRIG Phase 1

SPRIG Phase 1 was a three year AusAID-funded project which commenced on 30 Nov 1996 and terminated on 29 Feb 2000 (following a three month extension). The total cost of the project was approximately Aust. $2.9 million. The project focussed on the conservation, enhancement and wise use of priority forest and tree genetic resources in the South Pacific. The project had four components viz Conservation, Tree improvement, Institutional Strengthening and Project Management. The Australian managing contractor consisted of a consortium of CSIRO Forestry and Forest Products (Managing Agent), Queensland Forest Research Institute and FORTECH. Project countries included Fiji, Samoa, Solomon Islands, Tonga and Vanuatu. A comprehensive review of SPRIG Phase 1 recommended a continuation of the project to SPRIG Phase 2 with an increased emphasis on development and sustainability.

b) SPRIG Phase 2

The proposal for SPRIG Phase 2 follows a considered recommendation from the eighth Pacific HoF meeting held in Nadi, Fiji, Sept 1998 that the SPRIG project continue beyond the initial pilot phase (Phase 1). This meeting recommended, in sub-theme 6 of its meeting communique, that -

- *many of the activities conducted under SPRIG such as institutional strengthening, evaluation of tree genetic resources, tree improvement and provision of benefits to communities are of a longer term nature and need support beyond the present three year phase.*

- *SPRIG activities should be extended more widely in the region, through greater networking and sharing of technologies, information and genetic materials and development of parallel activities in more countries. Planting materials for atolls should be included.*

- *Recognising the numerous threats to forest genetic resources, a Pacific sub-regional plan for forest genetic resources should be developed, based on national action plans, as a matter of urgency. The proposed Sub-regional Workshop on the Conservation and Use of Forest and Tree Genetic Resources (to be held April 1999) is strongly supported and endorsed*

A second phase of SPRIG was also strongly endorsed at the Pacific Sub-Regional Workshop on Forest and Tree Genetic Resources held in Apia, Samoa in April 1999 and subsequently recommended in the AusAID mid-term review report of SPRIG Phase 1. Three relevant regional organisations *viz* SPC, SPREP and USP, have recognized the importance of conservation and management of forest and tree genetic resources. Each organisation has indicated an interest in SPRIG Phase 2, welcoming an opportunity for greater collaboration, leading to integration of regional components of the project. Requests for extension of SPRIG activities to smaller PICs in Phase 2 were also received from several PIC Governments.

Project Design Issues for SPRIG Phase 2

The design adopted for Phase 2 of SPRIG will maintain a combination of in-country, national priority activities to be undertaken in collaboration with National partners (Government and NGOs) and regional activities in collaboration with Regional partners. As in the pilot phase of SPRIG there are three regional partner institutions for the second phase *viz* SPC (which has its forestry programs based in Suva, Fiji), SPREP (the Region's organisation with responsibility for the environment: HQs in Apia, Samoa) and USP (main campus in Suva, Fiji and Alafua campus for agriculture in Samoa).

The design and implementation of SPRIG 2 has three objectives:

1. Training and equipping National partners to assume full responsibility for forest genetic resource activities and issues at National level,
2. Undertaking selected high priority activities in order to guide the overall objectives of the Project and provide training/demonstration opportunities.
3. Progressively embed key Regional project elements and activities of SPRIG within the relevant regional organizations over a five year period. Regional activities include networking of forest genetic resources workers, exchange of information,

training, regional germplasm collection and exchange programs, and development of regional guidelines for safe movement of tree germplasm.

Planning for regional integration of SPRIG activities can be explored in Pacific HoF meetings and followed up by dedicated meetings to explore future possibilities and options. A dedicated programme to attain regional and national sustainability will be a key design and implementation issue for SPRIG Phase 2.

One design option that was carefully considered was to base the Team Leader in the SPC offices in Suva so as to have very close collaboration between the project and collaborators in SPC and USP. The preferred option is to base the project in Australia but to maintain strong linkages with regional organisations.

The preferred base for the vegetative propagation work is in Fiji and Samoa. The Fiji base was highlighted in the SPRIG review but a design consideration is to strengthen links with Samoa and especially with SPREP in Samoa.

As previously stated sustainability of many project activities best lie in devolving parts of SPRIG to regional institutions. An important step in the development of this process will be the development of MOUs (or equivalent instruments) between the AMC and each regional and national organisation. These MOUs would cover current project and post-project linkage arrangements with Australia (or New Zealand). This could emerge as a design consideration for potential bidders. Possibilities of twinning arrangements might also be covered by these MOUs.

Implementation of the conservation strategies with SPREP, national partners and communities in Tonga (Ha'apai Conservation Area) and Vanuatu (Vathe/ Lorum Conservation Area) is a design issue that needs careful consideration. The objective is to conduct feasibility studies (and associated marketing studies) to determine how best to proceed in demonstrating compatibility of conservation and economic development of the tree resources. One design consideration is that the actual cost of this full implementation can't be ascertained until the feasibility studies are complete. This process oriented approach to design means that a change frame will be prepared at the end of year 2 to estimate actual costs more carefully. Depending on the results obtained, further funding would be sought. A grant of $10,000 per site (for Tonga and Vanuatu) is being set aside to establish a Rural Development Fund as a precursor to the full implementation of the results of the feasibility study. This fund would serve to start development activities.

Objectives

SPRIG Phase 2 is a five year regional project. The project goal is ***"to help PICs conserve, improve and better promote the wise use of the genetic resources of priority regionally important trees species to enhance environmental protection and to promote economic and rural development".***

The purpose of SPRIG Phase 2 is to ***"strenghten the capacity of the participating Departments and regional organisations to conserve, improve and better promote the wise use of priority genetic resources in order to promote sustainable rural development"***

Component activities in SPRIG Phase 2

The five components of SPRIG Phase 2 are,

- institutional strengthening and regional networking,
- conservation and sustainable management of priority species,
- tree improvement,
- demonstrating linkages between conservation, tree improvement and enhanced rural incomes, and
- project management

The design of SPRIG Phase 2 differs from Phase 1 in that greater emphasis has been placed on development and sustainability issues at both the national and regional levels. The project aims to develop local institutional capacity and facilitate regional and national arrangements and cooperation such that the project's activities will be technically and administratively sustainable at national/regional level at the end of Phase 2. Institutional strengthening will be mainly through development of local personnel with a balance of hands-on training, technical short courses and tertiary training in key subject areas, and building on skills developed in Phase 1.

Important development elements of SPRIG Phase 2 include:

- development of local germplasm sources (seedling seed orchards and clone bank) and *ex situ* gene conservation stands,
- development and demonstration of model plantings of the region's priority tree species, including sandalwood (village level plantings in Fiji, Vanuatu and Tonga), mahogany (semi-operational clonal plantings in Fiji and Samoa) and malili (vegetative propagation in Samoa),
- enhanced Government extension nurseries, including development of vegetative propagation facilities in Fiji and Samoa,
- promotion of small demonstration outgrower schemes; especially in Fiji, Solomon Islands, and Fiji, whereby a few selected lead farmers are encouraged to plant clones of genetically superior tree material, and
- development of income-generating forest genetic resource activities in support of community-based conservation initiatives in Vanuatu (Santo) and Tonga (Ha'apai group).

Implementation agency

The implementing agency for SPRIG Phase 2 will be selected by AusAID following the appraisal of tenderers willing to implement the project.

Implementation strategy

The project will be jointly implemented by the AMC and national and regional partners in accordance with the PID and annual plans. Regional

SPRIG News

PCCs will be held in the first and fourth years and provide a forum to discuss and review regional priorities and to plan regional activities. The first regional meeting will discuss the adoption of the PID. National PCC's will be held more frequently, 1-2 times per year, to discuss project objectives and monitor progress at national level.

The South Pacific Regional Forest Genetic Resources Expert group, an informal group of experts from Government, industry and NGOs, met twice during SPRIG Phase 1 and provided technical guidance and information on regional priorities. During implementation of the first phase of SPRIG, a very broad and diverse group of organizations and persons working on and/or with responsibility for forest and tree genetic resources in the South Pacific was identified, contacted and included in a SPRIG-maintained database. It is planned that these organizations and individuals be further involved and updated on SPRIG Phase 2 through the PIFT newsletter and electronically (through e-mail), and given all opportunity to input ideas and exchange information. The Pacific Sub-Regional Plan for the "Conservation, Management and Sustainable Use of Forest and Tree Genetic Resources" developed in Apia in 1999, will continue to provide an overview of regional priorities for Phase 2 of SPRIG.

It is planned that appropriate SPRIG activities will be successively adopted or taken up by regional organizations during Phase 2, especially years 4 and 5. An early step in this process will be the development of MOU's (or other appropriate instruments) between the AMC and the appropriate regional organisations. Representatives from SPC, USP and SPREP will be invited to participate in the SPRIG Regional PCC meetings, and to develop plans progressively for SPRIG regional activities to be incorporated into Regional organisation's plans and budgets during Phase 2 and upon its completion. Actual incorporation during Phase 2 will depend on the capacity of regional organisations to become more fully involved. SPC will continue to be the main regional organisation involved in SPRIG activities in SPRIG Phase 2.

Benefits and justification

The main immediate benefit of SPRIG Phase 2 will be the strengthening of national and South Pacific regional capacity in the areas of collection, assessment, improvement and conservation of priority forest and tree genetic resources. The training provided and experience gained during SPRIG Phase 2 will enable partner organizations to continue to work very effectively in these areas beyond project completion. In the medium and long-term, major economic and environmental benefits will be derived by all South Pacific islanders, through better management, sustainable utilization and development of the Region's forest and tree genetic resources.

Risks associated with SPRIG Phase 2 and attainment of its objectives are related to sustainability, both financial and personnel, and environmental factors. The sustainability/financial risk is that, despite appropriate training, staff are unable to continue important work on forest genetic resources due to general budgetary constraints of National Governments. The sustainability/personnel risk is that staff trained in the project are transferred or lost to the Department, during or after project completion. Environment risks to SPRIG Project activities will be minimised through appropriate management practices but potentially include damage to plantings from major cyclones, droughts, uncontrolled fire, and pathogen or insect attack.

Justification for SPRIG Phase 2.

Maintenance and enhancement of forest and tree genetic resources are vital for sustainable development in the South Pacific region. For peoples of the region, forest and tree genetic resources are not just a matter of scientific, economic (in monetary terms), recreational or ecological value. They constitute a capital inheritance that, until recent times, was passed on, relatively intact or in some cases enhanced, by past generations to current generations. Together with other plant and animal genetic resources, forest and tree genetic resources are the "capital" needed for development and maintenance of rural communities and upon which almost all "income" (both cash and non-cash) is derived (Thaman/SPRIG Phase 1).

Phase 2 of the SPRIG project has been designed to address both the problems and the potentials for forest and tree genetic resources and associated farming and forest ecosystems. The problems *relate to the rapid and essentially irreversible loss of these resources* associated with their over-exploitation/ unsustainable use through bad logging practices, land use change and climate change. In SPRIG Phase 2 these issues are addressed in both the institutional and conservation components of the project The potentials relate to the major opportunities to improve, develop and better utilize forest and tree genetic resources, with consequent economic benefits to villagers, the Forest Industry and Governments. This is addressed in the institutional and domestication/tree improvement components of the project. An important justification for Phase 2 will be the development and demonstration of linkages between the various SPRIG components and the alleviation of poverty.

Countries and National agencies involved

Forestry Departments in Fiji, Samoa, Solomon Islands, Tonga, and Vanuatu. Linkages with USP, SPC, SPREP and FAO are anticipated.

Duration and Budget

Five years with AusAID providing about $4.2 million and participating countries an in-kind contribution.

Conclusions

Tenders werre to be called by Aus, but unfortunately, SPRIG 2 is on hold because of political considerations in the Pacific.

Submitted by Doug Boland
Project Director
CSIRO Forestry and Forest Products
PO Box E4008
Kingston ACT 2604
Australia.

CODE OF CODUCT FOR SHARING TREE GERMPLASM WITHIN THE SOUTH PACIFIC REGIONAL INITIATIVE ON FOREST GENETIC RESOURCES (SPRIG)

Preamble

The South Pacific Regional Initiative on Forest Genetic Resources (SPRIG) is an AusAID-funded regional project involving Government forestry organisations in Australia, Fiji, Tonga, Vanuatu, Samoa and Solomon Islands. The three Australian members of the project are CSIRO Forestry and Forest Products, Queensland Forest Research Institute and FORTECH. The project commenced on the 1 December 1996 with a duration of three years. Solomon Islands was included in SPRIG on 1st July 1998. SPRIG is a development assistance project seeking to benefit the lives and environment of Pacific Island peoples.

Part of the project will involve the collection and field testing of tree germplasm in the five SPRIG countries and Australia. The field testing will involve the reciprocal exchange of germplasm amongst all SPRIG partners.

Plant genetic resources in Pacific Island Countries are protected under the jurisdiction of each country. Plant genetic resources in Australia are commonly accepted to be under the jurisdiction of the State Governments. This Code recognises the overall objectives of the Convention of Biological Diversity (CBD) in regard to access and equitable benefit sharing but also recognises that few countries in the region have implemented formal germplasm access regimes consistent with the CBD. For these reasons it is considered more appropriate to adopt a mutually agreed code of conduct based on goodwill to be followed by each project partner.

Under this code of conduct SPRIG partners agree that:-

A. Tree germplasm collected and supplied under SPRIG is for research and demonstration purposes only and remains the property of each contributing partner, and

B. The distribution of material to non-SPRIG parties and/or the commercial development of non-indigenous material within country by signatories to this agreement, will require additional negotiation with the SPRIG party who originally supplied the germplasm.

3. Species covered by this code of conduct

Species planned for collection and testing in Australia, Fiji, Tonga, Vanuatu and Samoa are shown in Appendix 1. Appendix 2 indicates a list of species selected for collection in Solomon Islands. Tree species in Appendix 1 were determined at the first meeting of the SPRIG Coordinating Committee meeting in Nadi Fiji, 2-4 Dec 1996. Tree species in Appendix 2 were determined in consultation with officials from the Forestry Division, SIG. The agreement should be interpreted to cover all these species plus any other tree species collected during the course of the project.

4. Scope of the code of conduct

This code of conduct is to be agreed to by the partners in SPRIG who are as follows-
a) CSIRO Forestry and Forest Products

b) Queensland Forest Research Institute (QFRI)
c) FORTECH
d) Forestry Department, Fiji
e) Forestry Division, Ministry of Agriculture and Forestry, Tonga
f) Department of Forests, Vanuatu
g) Forestry Division, Ministry of Agriculture, Forestry, Fisheries and Meteorology, Samoa

and

h) Forestry Division, Ministry of Forests, Environment and Conservation, Solomon Islands

4. Duration of code of conduct

This code of conduct will last for the life of the material collected and distributed.

5. Code of Conduct for Collectors

Collections of germplasm will follow the FAO (Food and Agriculture Organisation of the United Nations) code of conduct for tree germplasm collectors.

6. Transfer of tree germplasm amongst SPRIG partners

Tree germplasm constitutes genetic materials such as seed, pollen, vegetative cuttings, herbarium material and DNA. Plant quarantine guidelines will be strictly followed for all countries. The CSIRO Australian Tree Seed Centre, which is a designated plant quarantine centre, will be a temporary storage facility for collected germplasm. Collected herbarium voucher specimens would normally be lodged in an in-country herbarium, if present, and duplicates sent to the regional herbarium, University of the South Pacific, in Suva, Fiji. This follows normal international protocols for safe storage of such material.

Signed:

Mr Peter Sheehan
Commissioner of Forests
Solomon Islands

APPENDIX 1. Target tree species covered by code of conduct for sharing germplasm

Vanuatu	Samoa	Fiji	Tonga	Australia
Endospermum medullosum	*Swietenia macrophylla*	*Swietenia macrophylla*	*Toona ciliata*	*Toona ciliata*
Santalum austrocaledonicum	*Toona ciliata*	*Santalum yasi*	*Santalum yasi*	*Santalum spp.*
Swietenia macrophylla	*Intsia bijuga*	*Endospermum macrophyllum*	*Pometia pinnata*	
Agathis macrophylla	*Pometia pinnata*	*Agathis vitiensis*	*Syzygium malaccense*	
Pterocarpus indicus	*Terminalia richii*	*Intsia bijuga*	*Aglaia saltatorum*	
Garuga floribunda	*Securinega flexuosa*	*Pometia pinnata*	*Artocarpus spp*	
Syzygium spp	*Eucalyptus tereticornis*	*Cordia subcordata*	*Atuna racemosa*	
Intsia bijuga	*Tectonia grandis*	*Pterocarpus indicus*	*Diospyros major*	
Dysoxylon spp	*Terminalia calamansanai*	*Dacrydium nidulum*	*Syzygium neurocalyx*	
Elaeocarpus spirucus	*Calophyllum neo-ebudicum*	*Barringtonia seaturae*	*Inocarpus fagifer*	
Terminalia spp	*Planchonella torricelensis*	*Terminalia spp*	*Spondias dulcis*	
Canarium spp	*Syzygium spp*		*Bischofia javanica*	
	Casuarina equisetifolia		*Cordia subcordata*	

APPENDIX 2. Target tree species covered by code of conduct for sharing germplasm.

Solomon Islands

Vitex cofassus
Gmelina moluccana
Pterocarpus indicus
Cordia subcordata
Diospyros herbicarpa
Intsia bijuga
Pometia pinnata
Albizia falcataria
Octomeles sumatrana
Burchella subovata
Securinega flexuosa
Calophyllum kajewski
Dillenia solomonense
Palaquim spp.

CIRAD and IAC in New-Caledonia
A presentation of the forestry program

Jean Michel SARRAILH
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Context

The New-Caledonian Agronomic Institute (Institut Agronomique néo-Calédonien IAC) continues the actions of CIRAD in New Caledonia. The board and funding sources of IAC consist of CIRAD, the three Provinces and the government of New Caledonia.
The research programs are defined between CIRAD and the development services of the Provinces.
New Caledonia is widely known as one of the main spots of biodiversity in the world, and after planting nearly only Caribbean pines, forestry services of the three provinces plant now many local species.
New Caledonia is the third larger producer of nickel in the world. And revegetation of waste dumps needs researches to find out the suitable species and appropriated techniques.

The objectives of the researches for the development are:

- sustainable use of the biodiversity in order to rehabilitate and to enhance degraded lands and ecosystems.
- To contribute to tree plantations with indigenous species : Sandalwood, araucaria spp., kauri... and exotic timber trees
- To provide quality seeds for provincial tree plantations, but also to study the germination and vegetative propagation of endemic species.

The current researches:

The current researches are carried out in three actions:

- the main action is the implementation of methods for evaluation, conservation and use of vegetal biodiversity from New-Caledonia (for maintaining biodiversity, forestry plantations and rehabilitation of degraded lands
- improvement of silvicultural techniques (seed production, propagation,) for plantations with exotic commercial timber species (Pinus caribaea, Swietenia spp., Grevillea robusta,)

Programmes of researches

1 - revegetation

CIRAD has worked with mining companies for a long time, and now IAC is still working with them. At the moment the use of endemic species is expensive, and too often, companies work with maladjusted exotic species, or only two indigenous species that cannot allow the restoration of the previous vegetation. IAC is beginning to study how to decrease the coast of collect, nursery and plantation of endemic species.

2 – conservation of ecosystem

To preserve the last spots of sclerophyll (dry) forest a project is carried out between French government, the South Province, the North province, the New Caledonian government, IRD (Institut de Recherche pour le Developpement), UNC (Université de Nouvelle-Caledonie), IAC and WWF.

The aims are :

to conserve flora and fauna and these habitats

to increase protected sclerophyll forest areas

to regroup and to link spots of dry forest

to collect and to plant endemic and indigenous plants to restore degraded areas of sclerophyll forest

3 – evaluation, conservation and valorisation of local species

Plantations of local species are more difficult and more expensive and often more risky than exotic trees as Pines. But in term of environment, landscape, tourism, biodiversity conservation, it's appear that it's better for the country to plant indigenous trees.

Several species in New Caledonia are of great importance from a social, environmental or economical point of view at the local level and regional level. Most of theme are not well known, and the knowledge for the in situ or the ex situ management is very weak. More research is needed to evaluate the in situ dynamic of genetic resources through studies combining demography and population genetic methods.

In addition most of this species are not domesticated and techniques propagation, plantation, seed production need to be studied to supply the privates and public plantations.

One on the most interesting example is the research programme on sandalwood.

CIRAD and IAC work on Sandalwood because is no doubt, one of the most benefit species, not only in New Caledonia but also in several country of the South pacific.

There is only one species in New Caledonia and Vanuatu: Santalum austrocaledonicum, but several varieties: austrocaledonicum, pilusum and minutum. To establish management strategies adapted to the conservation of the biodiversity and to ensure quality oil durable production CIRAD carry out the sandalwood genetic variability.

By the means of molecular markers, we can observe that in Maré Island the genetic diversity is low, while Isle of Pines it is more important and that a strong island structuration exists suggesting a poor gene flow between islands. To avoid genetic pollution it seems better to not plant an other variety in Maré than itself.

The variety minutum is the most endangered variety, but after North Province inventories, new trees was discovered and several seedlings planted.

Now we try to develop a joint project about forestry genetic resources including sandalwood between French Polynesia, Wallis and Futuna and New Caledonia.

The objectives are:

- to know silvicultural techniques and potential production of local forestry species in plantation
- to install a seed production system from natural stands, or artificial for forestry reforestation
- the "in" or "ex situ" conservation

- To plant local species to product timber wood
- To diversify forestry products
-

The proposal actions are:

- Identification of key species to plantations objectives (endangered species, high economical or social value species)
- Resource evaluation from analyse of residual natural location areas and location of key species
- establishing "in situ" germplasm
- establishing "ex situ" germ plasm collections from natural stands
- developing appropriate practices and nursery seedling production in order to plant indigenous trees
- carrying out production plantations
- carrying out a research and development program

We hope enlarging this program almost on sandalwood resources with other country in South Pacific.

CIRAD and IAC in New Caledonia

A presentation of the forestry program

Jean Michel SARRAILH

Nouvelle Calédonie

CIRAD and IAC in New Caledonia
A presentation of the forestry program

1 – Context

2 – The objectives of the researches for the development

3 – The current researches

4 – Programmes of researches

- revegetation
- conservation of ecosystem
- evaluation, conservation and valorisation of local species
- forestry genetic resources project

Institut Agronomique néo-Calédonien

THE BOARD

Nouvelle-Calédonie

P. Iles

CIRAD

P. Sud

P. Nord

Institut Agronomique néo-Calédonien

Forestry program

Objectives

- sustainable use of the biodiversity to rehabilitate and to enhance degraded lands

- to contribute to tree plantations with indigenous (Sandalwood, Araucaria, Kauri) or exotic *Sweitenia*, *Pinus* ...) commercial timber species

- to provide quality seeds for provincial tree plantations

Institut Agronomique néo-Calédonien

Forestry program

Current researches

- Evaluation, conservation and use of vegetal biodiversity from New-Caledonia for forestry plantations and rehabilitation of degraded lands

-Improvement of knowledge about plantations with exotic commercial timber species

- Supplying forestry seeds

Revegetation

Revegetation




Conservation of ecosystem

Conservation and rehabilitation of sclerophyll forest project

The aims are:

To conserve flora and fauna and these habitats

To increase protected sclerophyll forest areas

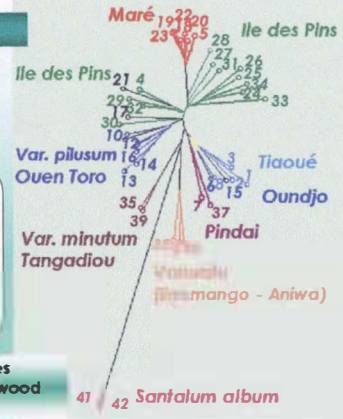
To regroup and to link spots of dry forest

To collect and to plant endemic and indigenous plants to restore degraded areas of sclerophyll forest

PRIORITY ACTIONS

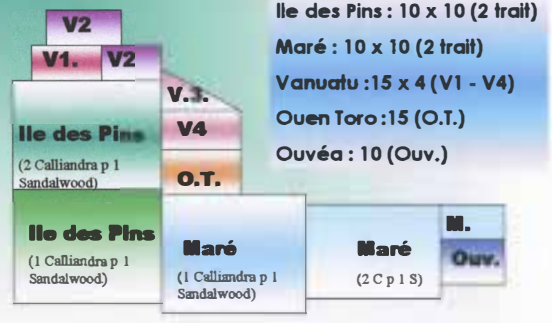
Sandalwood genetic variability study

To establish management strategies adapted to the conservation of the biodiversity and to ensure high quality oil durable production



Genetic distances between Sandalwood provenances

SANDALWOOD COLLECTION



Ile des Pins : 10 x 10 (2 trait)

Maré : 10 x 10 (2 trait)

Vanuatu :15 x 4 (V1 - V4)

Ouen Toro :15 (O.T.)

Ouvéa : 10 (Ouv.)

Forestry genetic resources valorization

Joint project : NEW CALEDONIA –WALLIS et FUTUNA – FRENCH POLYNESIA

OBJECTIVES

To know silviculture techniques and production potential of local forestry species in plantation

To install a seed production process from natural stands or artificial

To carry out local species plantations to product timber wood

To diversify forestry products